

# **Styrene Polymerization with AIBN**

Stanford Brown iGEM 2015

Protocol:

- 1) Add 10 ml of pure (99%) styrene into a clean 125 ml erlenmeyer flask
- 2) Add approximately 0.050 grams of AIBN into flask
- 3) Stir mixture to dissolve AIBN completely
- 4) Incubate mixture at 60°C for at least one hour
- 5) After one hour cool mixture on ice
- 6) Then slowly add mixture to 100 ml of Methanol while stirring
- 7) Continue to stir methanol for 10-20 minutes
- 8) Pellet polystyrene precipitate in 50 ml centrifuge tube
- 9) Wash with methanol and re-pellet
- 10) Let dry at room temperature for 24 hours
- 11) Weigh sample

Compiled from following Protocols online:

[http://www.polymat.lth.se/courses/pol\\_chem/PKEMI\\_LaboratoryProcedures.pdf](http://www.polymat.lth.se/courses/pol_chem/PKEMI_LaboratoryProcedures.pdf)

<http://www.eng.uc.edu/~beaucag/Classes/IntrotoPolySci/Bulk%20polymerization%20of%20Styrene.pdf>

[https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=8&ved=0CEcQFjAHahUKEwit05Wkgp3HAhVDVh4KHUnnAMo&url=https%3A%2F%2Fstudentportalen.uu.se%2Fuusp-fil-earea-tool%2Fdownload.action%3FnodeId%3D414510%26toolAttachmentId%3D95584&ei=7s\\_HVa2kEMOsecnOg9AM&usg=AFQjCNG2HcyshCZS0n9mQDuQqkJOxhI\\_Kw&sig2=EF5ds7wjNYRbt0Ah5igvDw](https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=8&ved=0CEcQFjAHahUKEwit05Wkgp3HAhVDVh4KHUnnAMo&url=https%3A%2F%2Fstudentportalen.uu.se%2Fuusp-fil-earea-tool%2Fdownload.action%3FnodeId%3D414510%26toolAttachmentId%3D95584&ei=7s_HVa2kEMOsecnOg9AM&usg=AFQjCNG2HcyshCZS0n9mQDuQqkJOxhI_Kw&sig2=EF5ds7wjNYRbt0Ah5igvDw)

<http://pslc.ws/macrog/demos/styrene.htm>